suppose a CLEC request is for a new service location at the end of a street. In the course of provisioning this request, BA-NY may have to extend the cable and place a terminal to serve this location. The activities that are involved with the cable placement, such as, the splicing and the placement of the terminal are properly classified as recurring cost activities. This also includes administrative activities, such as the additional data that will reside in the BA-NY's OSS. These one-time (construction) activities extend the plant to service the demand and provide a benefit to the BA-NY's network. Likewise, if during the course of provisioning a request, BA-NY performs activities associated with repairing the network, those activities also are properly classified as recurring.

The FCC has directed that costs should be recovered in a manner that reflects the way they are incurred. Specifically, the *First Report and Order* paragraph 745, states that:

> recurring costs must be recovered through recurring charges, rather than through a nonrecurring charge. . . .For example, we determine that maintenance expenses relating to the local loop must be recovered through

the recurring loop charge, rather than through a nonrecurring charge imposed upon the entrant.

In differentiating recurring from non-recurring costs, it is important to understand that not all one-time costs are non-recurring costs. The following costs are examples of arguably "one-time" recurring costs that have no place in a correct NRC model:

- **Capital assets such as OSS, computers, outside plant or plug-in cards**: These assets should be classified as recurring costs and the costs should be recovered over the economic life of the asset through recurring rates of the services(s) using the asset. For example, a local digital switch is a capital asset that is installed one time. The labor used to install it is also capitalized along with the switch and the full cost is properly recovered in recurring rates, not in non-recurring charges.
- **Costs of activities that benefits multiple or future customers**: For instance, the data in the ILEC's OSS (i.e., network inventory, facility locations, etc.) provide a benefit to all users of the network, so the cost of compiling and updating that data should be recovered in recurring rates, not through NRCs.

- **Maintenance of the network.** The Maintenance Expense account of the recurring rates is established to recover the cost of maintaining the network. It includes such things as the manual labor expense of the technicians and associated administrative labor for those who "fix the problems" associated with the network. This maintenance not only pertains to the physical plant, but also the information contained in the OSS databases.

Q. UNDERSTANDING THAT THE ABOVE MENTIONED ACTIVITIES SHOULD NOT BE INCLUDED IN AN NRC MODEL, WHAT THEN WOULD PRODUCE AN NRC?

A. All non-recurring cost elements must involve activities associated with the pre-ordering, ordering and provisioning processes that only benefit the customer placing the order (i.e., the CLEC).

Q. PLEASE DEFINE THE TERMS PREORDERING, ORDERING AND PROVISIONING.

A Pre-ordering: The process by which a CLEC interfaces with customers to determine customer needs. This information, such as customer premise address, phone number availability, feature availability and service availability, is made real-time accessible to CLECs electronically so they can accurately respond to customers when taking service and feature orders.

Ordering: The process by which a CLEC electronically submits a Local Service Request (LSR) to an ILEC via an electronic gateway. The ILEC responds electronically with a positive confirmation of order acceptance.

Provisioning: The process by which an ILEC, after receipt of an LSR order, performs the necessary functions to provide the service, interconnection, or Unbundled Network Elements (UNE) requested by a CLEC.

Q. WHAT GUIDELINES SHOULD THIS COMMISSION FOLLOW IN DETERMINING BA-NY'S NON-RECURRING COSTS TO PROVISION UNES?

A. The non-recurring charges to provision UNEs should reflect forward-looking, efficiently incurred costs in accordance with the requirements set forth by the FCC pursuant to the Telecommunications Act of 1996 (the "Act"). The rates should reflect mechanized, non-manual processes and minimize costly human intervention. In addition, the charges should recover only truly non-recurring costs and not the costs of constructing and maintaining the network, which are properly recovered in BA-NY's recurring rates.

In essence, this Commission should set prices at the same level that an efficient ILEC operating in a competitive

environment, using the most efficient technology available today, would charge. Such prices will not obligate CLECs to compensate BA-NY for costs stemming from any past or embedded inefficiencies. Correct prices will encourage BA-NY to become more efficient in the provision of UNEs and will encourage the development of competition in the local exchange market.

BA-NY Bases Its Proposed NRC's On The Wrong Network Model.

Q. WHAT IS YOUR FIRST CRITICISM OF THE BA-NY NRC MODEL?

A. In its Panel testimony, BA-NY states that it did not assume the same network model that it used for determining recurring rates. Instead of assuming the same network for both models, BA-NY has based its NRC study upon its existing embedded network. BA-NY asserts that it has made certain forward-looking adjustments to update its backward-looking study into a forward-looking model. However, this halfhearted attempt to upgrade is clearly not sufficient to meet TELRIC requirements.

Q. PLEASE EXPLAIN WHAT BA-NY WOULD HAVE TO DO TO MAKE ITS STUDY FORWARD-LOOKING.

A. First, and most fundamentally, BA-NY would have to abandon its filed cost study and start from scratch to develop a

cost study based upon the forward-looking network construct that underlies BA-NY's recurring cost claims. By keeping the network models the same, the labor activities and the associated costs would reflect true economic NRCs for the same elements priced in the recurring study. Instead, the NRC network model used by BA-NY was the "the network currently in place," which contains a combination of fiber and copper feeder, that requires significantly different tasks to provision UNEs.

Second, BA-NY must reflect only those efficient forward looking methodologies for interconnection.

Finally, BA-NY's cost study would have to rely upon a forward-looking, properly maintained and populated OSS as part of the network to determine costs. The data contained in the OSS would support the total demand, and virtually be error free. This means data such as the service locations (i.e., customer locations) and the necessary facilities that support that demand would be contained in BA-NY's databases and would be current and accurate. The labor required to build and maintain this information in the databases is properly classified as a recurring cost activity. This data, like the physical plant is an asset

to BA-NY, the cost of which should not be recovered through NRCs.

Q. DO YOU HAVE A SERIES OF EXHIBITS THAT EXPLAIN THIS APPROACH AND ILLUSTRATE WHY BA-NY'S CLAIMED NRCS MUST BE REJECTED?

A Yes. ATTACHMENT 21 to this reply testimony shows the conceptual drawing produced by BA-NY of its recurring network construct used to develop its claimed UNE costs. The drawing depicts electronics located in the central office connected by fiber to reciprocating electronics located in the field. This network construct has the ability to electronically cross-connect DSOs connecting end users to DS1 paths going on to CLEC collocation equipment in a digital form. BA-NY's drawing, however, also depicts analog terminations to the MDF, which are costly to interconnect and are not necessary in the forward-looking network construct that this Commission adopted in setting BA-NY's current UNE rates. In fact, BA-NY's forward-looking network model, quite properly, does not even include an MDF. Its NRCs should not reflect any activity on the MDF. BA-NY's choice of modeling this embedded, non-forward-looking method for interconnection results in higher NRCs, which will result in deterring CLECs from entering the competitive market.

ATTACHMENT 22 to this reply testimony is an example of the CO FRAME provisioning activities BA-NY has identified for the 2 Wire Loop. We have placed the CO-FRAME tasks from BA-NY's cost study onto this Attachment in order to highlight the inefficiencies suggested by BA-NY's cost study. As you can see from ATTACHMENT 22, BA-NY has chosen to convert the digital DS0 (representing the end user customer) to an analog connection appearing on the POT Bay. Here, a BA-NY technician will have to place cross-wires between the analog link and the CLEC Connecting Facility Appearance (CFA) to complete the path to the CLEC's equipment. Analyses of these tasks are included on ATTACHMENT 23 to this reply testimony. From this exhibit you can see the inconsistencies that plague BA-NY's cost study.

ATTACHMENT 24 to this reply testimony represents the same forward-looking network showing a more efficient means of interconnection. By using BA-NY's own forward-looking (recurring) network model, certain costs associated with manual MDF cross-connects would be virtually eliminated. This is true because currently available technology underlying that construct would allow BA-NY to electronically cross-connect DS0s to DS1 paths between a

CLEC's collocation equipment and BA-NY's central office electronics. The electronic cross-connect method would allow the various DSOs (representing the end user customers on BA-NY's network) to be combined as channels of a DS1 to the CLEC equipment. It is by far a more efficient, least cost, technically available method of interconnection under the forward-looking network construct that this Commission has adopted.

In ATTACHMENT 25 to this reply testimony we have represented the process steps and NRC costs that would result from this method of interconnection. Since cross-connections would be made electronically by the OSS at the due time indicated on the service request, this would also eliminate the necessity for all of the CO-FRAME and the activities of the RCCC/RCMC. This process flow representing NRCs essentially reflects the true economic cost associated with a network supplier entering the market, and would conform to TELRIC principles as articulated by the FCC. This use of forward-looking network design, not followed by BA-NY, contrasts sharply with BA-NY's non-forward-looking approach in which it claimed to identify the differences between Typical Occurrence and Forward Looking Adjustments(Connect & Disconnect). To

verify the method of interconnection and it's associated cost, CLECs (and the Commission) need to be presented with a process flow that demonstrates interconnection is obtained in the most efficient, least cost manner. We have also included ATTACHMENTS 26, 27 and 28 to this reply testimony as examples to represent process flows for various elements. When the process involves a difference in OSS interaction or the inclusion of manual work center activity, the process flow should demonstrate efficiencies obtainable under the forward looking network construct that the Commission has adopted. In addition, we discuss below that BA-NY must demonstrate -- which it did not -- that each of the activities identified as NRCs are not in any way ambiguous as to the classification of cost. As an example, if an activity supports the construction or the maintenance of the network (or benefit to BA-NY), then classification of that activity should be recurring, and as such does not belong in the NRC cost study. This would eliminate any possibility of double recovery between recurring and non-recurring rates.

Q. PLEASE GIVE AN EXAMPLE OF AN ACTIVITY THAT BA-NY INCORRECTLY IDENTIFIES AS AN NRC.

A. As an example, Field installation tasks, number 4 (Locate terminal and/or cross-connect box feeding premises)

represents intermediate cross-connections that are required to complete the path between the central office and the NID. Such cross-connections, however, will not be removed when the service or UNE is disconnected. In theory, it is no different than any other splice point on the path (cabling) between the NID and the central office. It is a necessary connection in the construction of the loop. If BA-NY recovers this cost as a NRC, it means the first customer will pay for the construction of that loop as a NRC, and the next user of that loop will not have to pay. Recovering this type of activity as an NRC is wrong. The proper cost classification of the intermediate cross-connect placement activity as a recurring cost activity will reflect that the cost to build the network is being shared by all who use that network.

Q. PLEASE HIGHLIGHT THE DIFFERENCES YOU SEE BETWEEN BA-NY'S RECURRING NETWORK AND NRC NETWORK MODELS IN TERMS OF NETWORK CONSTRUCT.

A. First, in its recurring cost study, BA-NY assumed 100% fiber feeder which terminates with electronics in both the field and the central office. For BA-NY to connect one of its customers to this network, it would do so by electronic cross-connects (made by the OSS), which represents a substantial cost saving to BA-NY. Conversely, when

connecting a CLEC customer, it assumes backward looking manual cross-connections at the MDF, which are labor intensive, costly and unnecessary in the forward-looking network.

BA-NY's recurring network model relied upon a network construct based on forward-looking technology. Properly applied, this construct eliminates years of different construction methodologies and supports today's need for high bandwidth. For instance, the necessity for conditioning pairs required for such services as ASDL would be virtually eliminated. This is because today's engineering guidelines recommend building the network with parameters that support these services and eliminates many, if not all, of the tasks required to condition loops. But if you consider the plant in the ground today, as BA-NY has done, it would include copper feeder and would probably need conditioning, resulting in additional labor hours to turn up a service. Significantly, BA-NY's failure to rely upon a forward-looking network construct as a foundation to develop its claimed NRC costs reflects the exact flaw that

the Commission found with BA-NY's NRC presentation in the Phase 2 cost case (Case Nos. 95-C-0657, et al).[74].

Q. HOW IS USING TWO DIFFERENT NETWORK MODELS GOING TO AFFECT NRC RATES?

A. Quite simply, it results in an apples to orange comparison and substantially inflates BA-NY's claimed NRC costs. The NRC study should reflect the work (labor cost) required to process requests for a CLEC assuming the least cost, efficient forward-looking technology currently available under the same network construct considered for the development of BA-NY's recurring UNE costs.

Q. ASIDE FROM THE USE OF AN INCORRECT MODEL, ARE BA-NY'S WORK TIMES REASONABLE?

A. No. In addition to reflecting activities that are unnecessary in a TELRIC environment, BA-NY has also substantially overstated the work times required for such unnecessary activities.

As an example, looking at the CO FRAME steps necessary to connect a new two wire link by the frame technicians are:

---

[74] Opinion No. 97-19, 12/22/1997 page 46, "Among the flaws in New York Telephone's study identified by the recommended decision was its "failure to present a comprehensive view of a forward looking system." The processes associated with such system rested not on New York Telephone's opponents but on New York Telephone itself, and New York Telephone failed to do so.

(1) receive the request, (2) analyze the information, (3) place the cross-connect, and (4) complete the order in the OSS. When a technician is ready to perform his/her duties, they enter data into an OSS to receive a work package for a specific amount of time. The command involves the due date or due time, and employee's ID. It is a simple command that instructs the OSS to review the work in the system, and generate a specific work package for that employee. The output is a list of jobs with specific instructions as to the placement or removal of cross-wires at specific frame locations (of course, in a forward-looking network no such activity would be necessary at all).

BA-NY work times for these tasks are unreliable, inflated and internally inconsistent. For example, the time applied to each order for the "Two Wire New Initial" is 7.49 minutes. Given that a technician may have 10 orders in a work package, the time waiting for the printouts would be greater than 1 hour (74.9 minutes). In fact, the systems generate a list of 10 jobs in less than 10 minutes. To further illustrate how unreliable this time is, the same task on a "Two Wire New Additional" nets only 4.64 minutes, when in reality the actual tasks preformed by the technician are exactly the same. In other words, to the CO

FRAME technician, the additional "elements per order" has no efficient effect on the work tasks involved in the placement of cross-wire. Each placement of cross-wire will take the approximate same amount of time. While it is true that efficiencies will be obtained in the order creation, it has little effect on the actual work being performed. Having separate schedules for New and Additional, are meaningless. Instead a schedule that represented an average cost would be more meaningful and regardless of how many elements were ordered on each request, NRC's would be assessed at the element level.

Additionally, BA-NY's probability assumptions for this same task are suspect. The forward-looking occurrence factor for the "Two Wire New Initial" is 75%, whereas the " Two Wire New Additional" is only 50%. These work times are unreliable, as there is no reason why "New Initial" and "New Additional" would be provisioned differently. Another example of an internal inconsistency in the same work group (CO Technicians) is the work times for activity of analyzing the request and placing the cross-wire (Task Nos. 8 and 11). "New Initial" and "New Additional" are different for no reason. To the CO Technicians, the tasks are exactly the same, as each order type will require a

cross-wire placement for copper feeder orders. The concept of "new initial" and "new additional" has ramifications to the business office for constructing the order, but for the technicians, each task should be the same for each element type (each produces a "UNE-2 WIRE LOOP").

Surprisingly, certain work times even appear to be exactly the opposite of what they should be. For instance, CO Technician Task No. 11 is used on the "Two Wire New Initial" and the "Four Wire NEW Initial". It represents the time to place the cross-wire between the ILEC's MDF and the CLEC's equipment. However, BA-NY indicates that it takes *less* time to place a 4 wire cross-connect than it does to place a 2 wire cross-connect. Given the fact that there are more connections to make for a 4 wire cross-connect and the fact that cable pairs may be spilt (on different verticals), it would appear to take more time for a 4 wire than a 2 wire. This is another indication of how unreliable and random the BA-NY model really is, and a further indication on why it should be rejected.

BA-NY Misclassifies Certain Costs As NRCs.

Q. WHAT IS YOUR NEXT CRITICISM OF THE BA-NY NRC MODEL?

A. As demonstrated above, BA-NY's NRC model is suspect because it ignores the distinction between non-recurring and recurring costs again and again, leading to incorrect and inflated NRCs. If BA-NY is allowed to recover the cost of *recurring* activities in *non-recurring* charges, the net effect is a double recovery of cost -- a windfall that will end local access competition before it can begin. Additionally, the activities BA-NY has listed are often ambiguous and also combine activities that would be the result of both a recurring and non-recurring activity.

Q. PLEASE GIVE SOME EXAMPLES WHERE BA-NY HAS COMBINED BOTH RECURRING AND NON-RECURRING ACTIVITIES

A. The CO FRAME Task number 8 is a good example of a combined task. The task (Confirm the assignment by verifying that the cable and pair assignment is correct. Notify RCCC of any troubles and obtain new assignment) represents two individual tasks. The first part, "Confirm the assignment by verifying that the cable and pair assignment is correct", may be considered a non-recurring cost activity. It is a part of the normal work functions when a CO FRAME Technician prepares to work a service request.

However, the second part of the task, "Notify RCCC of any troubles and obtain new assignment," is a separate task that will not happen on every request, it only happens when there is trouble with the assignment. Furthermore, this task may be the result of incorrectly populated BA-NY data bases. For example, the data base may reflect that the assignment is available, while the wires on the frame reflect that the assignment is working for someone else. When this situation happens, the cost to correct the wrong assignment would result in a maintenance cost that would be recovered in the recurring rate as a maintenance (database) expense.

BA-NY makes no attempt to explain why these two activities should be combined as one. The same sorts of problems are duplicated throughout its model, making it extremely difficult to validate. This again demonstrates that BA-NY has not followed the guidelines set forth and mandated by the FCC.

Q. PLEASE IDENTIFY ANOTHER EXAMPLE OF HOW BA-NY HAS MIS-CLASSIFIED RECURRING ACTIVITIES AS NON-RECURRING.

A. BA-NY has incorrectly classified many recurring activities as non-recurring. As an example, on the "Two Wire [loop] Initial New," BA-NY has indicated a requirement that an

activity will occur 20% of the time, resulting in 27.68 minutes of labor cost. The task (If a problem occurs, resolve the problem with field installation technicians and the RCCC to insure that the CLEC can reach its end-user at the time of installation) is not only vague in its description and points to internal or network problems as the cause. The cost of activities to address these problems should be recovered, if at all, in the recurring rates through maintenance expenses. The net effect of this activity is an additional 5.54 minutes of manual labor assessed to every element service order of this type - essentially a built-in double recovery solely to compensate for BA-NY's inefficiency.

Q. YOU HAVE INDICATED THAT BA-NY'S FIELD INSTALLATION CHARGES AMOUNT TO A DOUBLE RECOVERY OF CONSTRUCTION AND MAINTENANCE EXPENSES. CAN YOU PLEASE EXPLAIN WHY?

A. A certain number of BA-NY's Field Installation activities are necessary for constructing the outside plant and

therefore are not non-recurring costs.[75] As an example of Field Installation activity, No. 8 will be necessary to complete the electrical path between the distribution plant and the feeder plant. It is a one-time activity; but because it is left in place when the service is disconnected, it is really recurring. This activity will benefit the first customer placing the order, and it will benefit a future customer on subsequent orders because BA-NY will not have to dispatch and perform this activity on subsequent requests. Therefore the cost associated with it does not directly benefit one customer, and thus is not a non-recurring cost activity.[76]

Moreover, BA-NY has designed its study to charge routinely for field work that is either (1) recurring, not non-recurring, (2) entirely unnecessary, or (3) arbitrary.

---

[75] The FCC in the First Report and order addresses this issue at paragraph 789:

> Most loop costs are associated with a single customer. Outside plant between a customer's premises and ports on incumbent LEC switches is typically either physically separate for each individual customer, or has costs that can easily be apportioned among users. *We therefore conclude that costs associated with unbundled loops should be recovered on a flat-rated basis.* (Emphasis added).

[76] First Report and Order at 682: The forward-looking costs directly attributable to local loops, for example, shall include not only the cost of the installed copper wire and telephone poles but also the cost of payroll and other back office operations relating to the line technicians, in addition to other attributable costs.

These problems are most evident in BA-NY's proposal of two separate rates for unbundled loops: "No Premise-Visits" rates and "Premise Visits" rates.

Field (or Premises) visits are for the establishment and maintenance of the network, i.e., constructing or maintaining the network. This field work should be classified as a recurring activity, not recovered in non-recurring cost. For instance, BA-NY Field Installation activity tasks Nos. 6 and 7 occur when the assigned pair is proven defective, and the technician must contact another department to interact and receive a new assignment. Such activities are necessary for the maintenance of the network and as such the cost should be born by all users in recurring rates. If BA-NY were allowed to recover this installation cost as a non-recurring cost, they would in fact be paid twice for the same network, once in the recurring rates (EF&I cost or Maintenance expense), and again as a non-recurring cost.

Second, BA-NY applies certain Field Installation costs 100% of the time, whether they are necessary or not. When the individual Field Installation tasks are examined, the

activities amount to dispatch on every single request.[77] These activities are unnecessary, they do not conform to the activities BA-NY performs for its retail customers, and should be excluded entirely from the cost studies.

Finally, BA-NY's treatment of field work is unnecessarily vague and allows for arbitrary charges for NRCs. Because of the way BA-NY's table of NRC rates is constructed, one is led to believe that not every request will result in a field installation visit. Thus, CLEC's will have no way of knowing ahead of the service request if field installations are required.

To make matters worse, the BA-NY model fails to demonstrate how charges will actually be applied when a CLEC places an order for UNEs. CLEC's need clear rates to convey to their customers during the pre-ordering stage because these charges will be passed on to the consumer, and their decision to select a CLEC for local access will be based in part on these charges.

[77] See Work paper A, TAB 1, Field Installation activities 1, 2, 3, 13, 16, & 20. These activities are represented by a typical occurrence of 100% and a forward-looking adjustment of 100%. The Net effect will be cost accessed to 100% of the CLEC orders for this element type.

BA-NY'S NRCs Do Not Reflect Efficient Use Of OSS.

Q. DO YOU HAVE COMMENTS ON THE WAY THAT BA-NY HAS INDICATED THE USE OF ITS OSS FOR PROCESSING SERVICE REQUESTS?

A. A forward-looking cost model should reflect the greatest feasible electronic exchange of information between companies. BA-NY's model fails to do so, in several ways.

First, BA-NY's model assumes too high a level of manual intervention in the service ordering process. A TELRIC study of NRC's must reflect a wholesale environment in which BA-NY's customers are the CLECs, not end-users. Consequently, the study must recognize that the CLECs will interact with BA-NY electronically when placing UNE orders. In the network, orders for UNE's flow through the various OSS (preordering, ordering, provisioning, repair, maintenance and billing) with little or no manual intervention. Essentially, once the customer and desired services have been accurately identified and transmitted into the system, the integrated software and databases of the OSS perform the rest of the functions to align and activate the necessary elements.